



*British Journal of Education, Society &
Behavioural Science*
2(2): 85-102, 2012

SCIENCEDOMAIN *international*
www.sciencedomain.org



Academic Performance at the First Grade of Secondary Schools (Gymnasium) of Students Who Attended Small Rural Primary School

Ioannis Fykaris^{1&2*}

¹Department of Elementary School, University of Ioannina, Greece.

²12, Anapafseos, Katerini, Greece, 60100.

Research Article

Received 9th November 2011
Accepted 11th January 2012
Online Ready 18th February 2012

ABSTRACT

Aims: The aim of this research was to investigate the progress of students who study at Small Rural Primary School (SRPS), made in the first three grades of high school, based on their school performance since there is not such an empirical research in Greek bibliography.

Study Design: An empirical Cross-sectional study.

Place and Duration of Study: Department of Primary education University of Ioannina between September 2007 to June 2010.

Methodology: The sample was taken from three prefectures of North Greece. Choosing by lot from the high schools of the above prefectures, there were chosen those high schools which accommodated students from the three types of SRPS. From those students were chosen those ones that attended SRPS during their six year attendance in primary school. As far as the social background of the students there was no problem, as they all came from agricultural families with medium or inferior educational level of the parents. Based on the above criteria the sample consisted of 146 students.

Results: Summing up the findings of this research, a general statement is inferred: That SRPS are able to provide essential and adequate teaching work, reversing the opposite viewpoint. From the findings of the research, also we conclude that they can be combined with the corresponding findings of other researches contacted internationally and which lead to the estimation that there should be a differentiated approach of SRPS towards the elevation and the support of their educational and teaching work. The tendency therefore, of the educational policy as well as that of the rulers (those in office) should head for its functional improvement and not unsubstantiated logic of its "abolition".

*Corresponding author: Email: bovolianna@yahoo.com;

Conclusion: Concluding, it is stressed that with the present research is covered an essential bibliographical gap, whereas simultaneously new horizons for research and approach of SRPS open.

Keywords: Achievement; performance; subject; small rural primary school.

1. INTRODUCTION

The question regarding the possibility of provision ample education in Rural Schools, as far as the performance of the students who attended them is concerned, as well as the potential of continuing their attendance in Secondary Education is a focal point over the last 25 years in discussions about the existence and the functional role of small rural primary schools (SRPS).

Any attempt to make references of the SRPS in the educational systems of other countries to that of Greece is confronted with subjective difficulties, because of lack of wider and substantiated standpoints. Most of the relevant researches were focused to the attitude of teachers about the SRPS and not so much on students' performance. The researching attempt is somewhat limited, while the issues that concern the SRPS are especially high. On the other hand there is a tendency to solidify the unsubstantiated view that the SRPS are "ineffective" schools and as a result they should be abolished. Is that, though, the most "effective" solution? The question is intensified, when the whole orientation of the official legislation and by extension, the educational policy, leads to the emergence of the One Age Classroom School (OACS). On the other hand, the whole preparation of the future teachers in the Pedagogical Department of Primary Education in Greece is directed towards teaching in OACS. This rationale, however, is consistent with the situation on an international level, where there has been an effort to find solutions for the improvement of the quality of education provided by all types of schools.

The abolition of SRPS is internationally considered as a possibility, but in the majority of the cases as an utmost solution. What is actually aimed at is effective solutions which are a product of a meticulous and multilevel thought, something which acts as a pressing need towards the formulations of the educational policy, so as to start considering this issue in a differentiated manner (Gallagher, 1993a).

This tendency of "abolishing" the SRPS is based on the argument of the existence of "hypothetical disadvantages" (Dewalt, 1997; Fuller, 1994; MacLaughlin, 1997; OECD, 1994, 2003; Tabitha and Terry, 1995; Weishaupt and Fickerman, 1998; Aksoy, 2008; Topracki, 2010). However there are very limited scientifically substantiated proofs that can support these hypothetical arguments. Nevertheless, despite having limited existence of valid and trustworthy proofs, the ones we have can lead to the estimation that SRPS are capable of providing a satisfactory educational level to their students. The main estimation is that the performance of the students of SRPS is not differentiated to that of their classmates in corresponding OACS (Fykaris, 2002). This estimation operated to point out in the empirical research, which presented in this article and the basic question is, first, if students who have attended SRPS in general present low performances in high school. Second, if students from SRPS have especially negative performance in the first grade of high school, which is

the adaptation grade in Secondary School and third, if students who come from one-room primary school are weaker at High School than their classmates who come from TCS and THCS.

2. BASIC CHARACTERISTICS IN GREEK PRIMARY EDUCATION

Primary education in Greece is 10 years and involves the education and training of children between the age groups of 6 to 14. It is compulsory for all male and female citizens, and is free at State schools and there is the same curriculum all over Greece for all types of schools (SRPS and One Age Classroom School). The objective of primary education is to ensure that every Greek child acquires the necessary knowledge, skills, behavior and habits to become a good citizen and is raised in accordance with the concept of national morals and that he/she is prepared for life and for the next level of education in accord with his/her interests, talents and capabilities and his/her high academic performance (Greek Pedagogical Institute, 2003).

The emphasis in modern consideration in Primary education in Greece is shifted from the question "what differentiates an effective school from a non-effective one" to the question "how and through which procedures are the teaching results differentiated"? The answers to the questions which arise is attempted to be found via two main theoretical models. The first one is the "Goal model" with functional orientation and as a main criterion for effectiveness the one of achieving the teaching goal (Little, 2006). The second model is the "systems model", which stems from the consideration of the procedural functionalism of open systems, where the inputs are converted into outputs by the influence of intra organizational factors. These approaches do not act restrictively for certain types of school, but generally for every type of school as a complex social organization, where formal and informal relationships and structures are developed, which are characterized and characterize a general educational as well as teaching undertaking which takes place in it.

It is obvious; therefore, that this viewpoint is put on a new basis as the "criterion of effectiveness" in Greek Primary Education does not comprise a linear relation but a multilevel condition of various factors which influence both the procedure and the final achievement of teaching which is mirrored in the level of performance of the students. In the frame of those various factors we can also include: the school environment, the teaching style, the teaching strategies as well as the procedures of successfully confronting clashes, or decision making (Greek Pedagogical Institute, 2003).

On the basis of this dimension the characteristics of effectiveness are encased in a frame of functional criteria, which are based on the same structural principle of the culture, the targets and the prospective. Thus, the main direction of the "rural" or "small" or "one room" primary schools has to be their functionalism as to the provision of every possible educational benefits to their students, in order to achieve the utmost teaching and educational results, with the elimination of any possible inequalities that might arise.

These basic characteristics in Primary education in Greece appeared according to the OECD (2003) in other countries as Spain, Portugal, and Turkey or in India (Kishore, 2003). In any case the main objective of primary schooling/basic education/ compulsory education is to raise literate and numerate individuals to ensure high quality life in social and global platform. The concept of literacy here refers to the capacity of the student undergoing such a process to exercise his/her knowledge and skill, analyze the underlying reasons and

conclusions of events and phenomena, and to bring solution to any problem confronted in life.

3. THE INFLUENCE OF TEACHING ORGANIZATION OF SRPS ON THE PERFORMANCE OF THE STUDENTS WHO ATTEND THEM

Because of the special characteristics of SRPS which are summarized in multiaged classes, in co-teaching and the extensive use of silent tasks which on the one hand are based on but at the same time are enforced by the teaching principle of self-acting, the teaching activity is organized mainly in three levels with absolute continuity, cohesion and unity:

- The personal, with the individualized task
- The interclass, with the interaction and cooperation of students of different classes and age groups.
- The social with the harmonization of the immediate natural and social environment (Goldon, Hargreaves and Comber, 1998; Kumar and Oesterheld, 2007).

What is asked for is the harmonization of these three levels and the contribution and functionalism of the teacher is decisive, as he is asked to harmonize these levels and secure the prerequisites for the successful teaching (Fykaris, 2010) because:

- i. He is facilitated in organizing the school in the perfect democratic micro-society.
- ii. He is facilitated in the reconstruction and adaptation of the normal program to the school conditions and mainly in gathering the students or in unifying the knowledge in wider sectors or thematic approaches.
- iii. He has the freedom to develop group work.
- iv. He has the ability to connect learning with its own sources (Galton, Hargreaves and Comber, 1998).

For a smoother, however, success of the above what is necessary is the reconstruction of the program in a flexible way. This can be achieved with the proper variation of the teaching process as a whole, so that it can be adjusted to the needs, the interests, and the experience of the students.

This prospect is really important because it is supported by plenty proofs that the size of the school is not what determines the effectiveness of the school but the organization of the teaching process as well as the teaching ability of the teacher. On the other hand the organization of the teaching is a complex and multilevel phenomenon, which combines a number of factors which are reflected in the inclination of the students to participate in the teaching process as well as in the final result of this participation as it is expressed by the level of their performance (Cohn and Rosmiller, 1997).

In any case, however, it is necessary to point out that the performance of the students is not a linear relation, but a complex situation, which does not seem to be dependent on the type of the school attended, but on various other factors like: the motivation to learn, their

expectations, the culture of the school and of the local community, the family background and others. The above are documented by a series of researches where it is pinpointed that in SRPS there are quantitative and qualitative elements which contribute to the sufficient education of the students who attend them. In particular in the quantitative elements among others, we can include: the chances for an autonomous and free learning, the time limits of effective participation in the teaching process through silent tasks, and even the functional variation of the realization of the curriculum framework of teaching encouragement.

On the other hand the qualitative characteristics refer to the constructive psychosocial environment of the classroom, the immediate and constant interaction of the students and the grouping with criteria which are above the one and only criterion of age. On this particular issue the supporters of the movement of Progressive Pedagogy and especially Peterson, Otto and Montessori were critical in practicing grouping, according to their age and suggested co-teaching of students of different ages, emphasizing on co operational learning (Fykaris, 2010).

Afterwards their viewpoint was supported and proved by future research (Slavin, 1994) which showed that co-operative learning has positive influence to almost all the students regardless of the type of school they attend and reinforces the level of their school performance both at Primary and Secondary Education (Ribchester and Edwards, 1998). International researches as well as research in Greece through limited, indicate that the learning performance of students of SRPS are equally well to those of students of non-SRPS (Fykaris, 2002; Galton, 1993; Galton et al., 1998). What is more, it has been proven that the external organization of the school does not play the most important role in the effectiveness of a school. Generally speaking, there does not seem to be a strong relation between the "school performance" and the "size of the school", but that the school performance of the students depends on:

- i. The small number of students in the class.
- ii. The teaching ability of the teacher (Galton, 1993; Galagher, 1993; Galton et al., 1998; Tyler et al., 1998).
- iii. The kind of management of both the school and the school class.
- iv. The synthesis of students' dynamic.
- v. The emphasis which given both to the school and school class academic knowledge.
- vi. The level of class managing by the teacher.
- vii. The level of managing the teaching time.
- viii. The support and encouragement to learn.
- ix. The professional development of the teachers (Menon and Rao, 2006; Fykaris, 2010).

It is also relevant to:

- a. The general learning environment which is formed both in the school and the classroom, in order to succeed in the learning goals.
- b. With the expectations, as well as the perspectives, which are set by the students according to their background and their general abilities.
- c. With emphasis on the academic knowledge and the organizational structure of both the teaching process and the curriculum, as well as the development of the general teaching process. Results of many researches support the view that higher performance is achieved at schools where: the orientation for academic

achievements is clear, the learning activities are properly constructed and a specific objectives are set by the students (Cohn and Rossmiller, 1997).

The feature, through, which is necessary to be stressed out is the level of performance on one or more fields of knowledge or generally the evaluation of learning, is not a linear result of the type "action-reaction", in the sense that "successful teaching therefore higher performance". And this is so because the result of the attempt to develop the general number of students derives from various emotional and social intervention which differentiate the learning result and the learning behavior of an individual. For this reason the objective estimation of the actual performance cannot result from one and only measurement but after continuous measurements which take place in different periods and under different circumstances. What is clear after all the above is that the substantiated views indicate that the performance is a multilevel situation, which includes several parameters. It is obvious, though, that the parameter that plays comparatively the smallest role on the level of performance is the size of the school regarding the number of attendants. Therefore, it is doubtful whether the students who attend SRPS have low performances which are reflected in their future attendance in Secondary Education. This question tries to answer this article with the research which presented in the following.

4. EMPIRICAL APPROACH

4.1 Description of the Research

The **aim** of this research was to investigate the progress of students who study at SRPS, made in the first three grades of high school, based on their school performance.

The **sample** was taken from three prefectures of North Greece.

Choosing by lot from the high schools of the above prefectures, there were chosen those high schools which accommodated students from the three types of SRPS: OCS, TCS and THCS. From those students were chosen those ones that attended SRPS during their six year attendance in primary school. As far as the social background of the students there was no problem, as they all came from agricultural families with medium or inferior educational level of the parents (The majority of the parents were high school graduates).

Based on the above criteria the sample consisted of 146 students who are divided as follows:

They attended:

1. OCS a total number of students 39 (21 boys and 18 girls).
2. TCS a total number of students 33 (6 boys and 27 girls).
3. THCS a total number of students 74 (43 boys and 31 girls).

The performance of these students was checked in the 3 years they attended High School. Attendance periods for High School 2007-2008 (first grade) 2008-2009 (second grade), 2009-2010 (third grade). This particular procedure was followed in order to have different measurements in different periods so as to secure the reliability of both the evaluation as well as the results.

For all the students the anonymity was kept, protecting in this way the personal data of all the students. To achieve this, every student was given a code number from 1 to 146.

Basic **assumptions** for this research were the following:

- i. Students who have attended SRPS in general present low performances in high school.
- ii. Students from SRPS have especially negative performance in the first grade of high school, which is the adaptation grade in Secondary School.
- iii. There is a considerable percentage of learning leaking in High School for students who attended SRPS.
- iv. Students who come from one-room primary school are weaker at High School than their classmates who come from TCS and THCS.
- v. The best performances are achieved by those students of the sample who come from three-room primary school, provided that they bear similarities to the educational and teaching process of OACS.

As a **statistical index of processing and analysing** was used the **average rate**, as the main index of the mainstream, as well as the t-test, which helped in checking the tendency of the Average rate. For the processing and analysis of the data of this particular research, was considered proper to use this particular mainstream index, taking into account the fact that markings comprise grouping distributions, as for both the total of the general performances of the subjects and the particular performances per subject, sex and class. Therefore, the Average rate expresses the central rates of the distributions around which the rates of the individual cases of distribution are gathered.

The **analysis** of the performances was realized through the analysis of the average rates of the following parameters.

- Performance per permanent position.
- Performance per permanent position and per grade in High School.
- Performance per school subject, school permanent position and sex.
- Development of both the general performance and the individual performances per school subject, permanent position and sex in the three grades of High School.

More specifically, as far as the analysis is concerned, the one that was used was the **Variation Analysis (ANOVA)**, which is a technique that analyses the variation, so that the potential differences between the performances in various school subjects in the three grades of high school, in the school groups which have been chosen, can be checked (OCS, TCS, THCS). In each case, the data are described in the chart and the emphasis is given to the difference between the performances is statistically important or not. If rate is $<0.05\%$ we can allege that the differences are statistically important, allowing for a margin of 5% error. The "*rate importance*" indicates again if for this particular relation the difference is important or not. Moreover, the performances were rounded up or down, depending on the decimal unit (above 0.5 for the maximum performance, below 0.5 for the minimum one). The subjects taught in the three grades of High school, were organized in subject groups. In each group a grading was given, which is the Average Rate of the performances of the subjects included in each group.

The subject groups were the following:

SUBJECT GROUPS

A' Grade

- 1) Language (Ancient Greek + Modern Greek)
- 2) Maths
- 3) Sciences (Biology + Geography)
- 4) Foreign Languages (English + French)
- 5) Theoretical Subjects (Religious Education + History)
- 6) New Technology

B' Grade

- 1) Language (Ancient Greek + Modern Greek)
- 2) Maths
- 3) Sciences (Physics + Chemistry + Geography)
- 4) Foreign Languages (English + French)
- 5) Theoretical Subjects (Religious Education + History)
- 6) New Technology

C' Grade

- 1) Language (Ancient Greek + Modern Greek)
- 2) Maths
- 3) Sciences (Physics + Chemistry + Geography)
- 4) Foreign Languages (English + French)
- 5) Theoretical Subjects (Religious Education + History)
- 6) New Technology

The grading range was formed on the grounds of the laws in force. Specifically according to Greek Law 352/1975, grading is defined as follows:

- 10-12 Fairly good
- 13-15 Good
- 16-18 Very good
- 18-20 Excellent

4.2 Main Limitations of Research

- i. Due to the fact the findings derive from a specific area, it is rather impossible to generalize.
- ii. A comparison with the performances of the students who attended the OACS is not attempted. That would extend the survey beyond its limits. However, that could definitely become the subject of a future survey.
- iii. The surveyed approach focuses only on the performances as they are reflected in the grading – evaluation they receive in high school, and what is not taken into consideration is other features such as social characteristics of the students and social interaction among students, the culture of the school and other relevant characteristics, which might influence in a differentiated way the performance.

4.3 Findings and Results

Below are presented the statistical charts with the average performance of school subjects, chosen for the three school years of the high school student sample. One of the basic results is that students of the sample present with satisfactory academic performance. The other one basic result is that girls that attend SRPS present better performances compared to boys and the majority has very good school records. Specific findings are presented below.

4.3.1 Regarding OCS

- There is no student leaking, something that does not verify the corresponding hypothesis of another research, as well as the standpoint that supports that students who come from one room schools, have a dwindling interest as well as abilities to attend adequately high school on the basis of the knowledge they acquire in this particular type of school.
- It has been noticed that students who have attended *OCS* schools present a stable performance as for the Average Rate in all three years of attendance in High School.
- The average rate of their performance ranges on satisfactory levels (from 14.5 at grade A to 15.5 at grade C).
- The girls that attend *OCS* school present better performances compared to boys and the majority have very good school records (15 and above).
- There has been discovered a relevant stability among all the school subjects in all three years of attendance in high school. However, there has been a relevant decline in the performance for the subject of maths throughout the school years, which shows a climax in grade C.
- Of particular interest is the quite satisfactory performance of the students, for the subject of technology where the performance of the students who attended one room schools, is particularly satisfactory throughout the attendance of high school.
- A very significant finding is that both the general performance of the students as well as their partial performance in each subject, ranges from satisfactory to very satisfactory in grade A, which entails:
 - Satisfactory, transition and adaptation from primary school to high school.
 - The general educational and operational structure of one room primary school, presents a satisfactory level of providing adequate educational potentials to the students, to continue their studies in the next educational grade, that is in high school. This finding as well does not support the hypothesis but also the mainstream view that *OCS* does not provide adequate educational work to their students who present a decline in their performance and cannot continue their attendance satisfactorily, to the next educational grades.

- By general estimate, a tendency towards relevantly high performances in all three grades of attendance in high school remains stable. More specifically this is depicted in the girls' performance and in a rather satisfactory level in the boys' performance.

The above findings lead to the conclusion that the students who have attended OCS achieve satisfactory adaptation in high school which in turn entails the existence of adequate educational infrastructure in one room school. This estimation entails the existence of adequate learning standards which can lead to the inference that even at this sector, teaching in one room primary school is not deficient in quality and adequacy. The general inference is that OCS is not inferior schools, but it can produce satisfactory educational and teaching work and a possible attend to enhance its operation could definitely contribute to even higher levels of student performance. More specifically as far as the girls are concerned on the average, they achieve satisfactory performances throughout the three year studying at high school. On the other hand, the boys, while they achieve lower performances, compared to those of the girls, it has been found that there is a gradual upward tendency during their studies at high school.

Table 1. Type of school: OCS

		Descriptively		
		N	Mean	T.A.
Language	A1	13	14.00	3.697
	A2	13	14.00	3.786
	A3	10	14.80	3.553
	Total	36	14.22	3.602
Mathematics	A1	13	13.31	4.049
	A2	13	12.00	3.162
	A3	10	14.80	3.425
	Total	36	13.25	3.652
Sciences	A1	13	14.62	3.254
	A2	13	13.85	2.641
	A3	10	15.10	3.381
	Total	36	14.47	3.038
Foreign Languages	A1	13	14.31	3.750
	A2	13	14.62	3.228
	A3	10	14.90	3.143
	Total	36	14.58	3.316
Theoretical Subjects	A1	13	14.15	3.671
	A2	13	14.15	3.805
	A3	10	15.10	4.012
	Total	36	14.42	3.729
New Technology	A1	13	14.85	2.410
	A2	13	16.15	3.023
	A3	10	15.50	2.799
	Total	36	15.50	2.731

Table 1 continues.....

		Total of Squares	Square of average rate	F	Importance
Languages	Among Teams	4.622	2.311	.170	.845
	Within Teams	449.600	13.624		
	Total	454.222			
Mathematics	Among Teams	44.381	22.190	1.734	.192
	Within Teams	422.369	12.799		
	Total	466.750			
Sciences	Among Teams	9.303	4.651	.489	.617
	Within Teams	313.669	9.505		
	Total	322.972			
Foreign Languages	Among Teams	2.004	1.002	.086	.917
	Within Teams	382.746	11.598		
	Total	384.750			
Theoretical	Among Teams	6.465	3.233	.222	.802
	Within Teams	480.285	14.554		
	Total	486.750			
New Technology	Among Teams	11.115	5.558	.734	.488
	Within Teams	249.885	7.572		
	Total	261.000			

4.3.2 As for TCS

- The students who have attended a two room school present a strong stability through out their studies at high school. The importance of the finding is enhanced by the fact that a percentage of 36,4% the performance of the students reach the highest level, which ranges between 18-20. A very important finding is also that a corresponding percentage ranges in a very good performance (between 15 -17) in all three years of attendance in high school. Even in this case, the hypothesis is not verified, but also the viewpoint that students who attend SRPS receive education of inferior quality which does not allow them to continue their studies to the higher education grade satisfactorily.
- The girls achieve high grades in all learning levels during their studies at high school.

- There has been found a smooth adaptation of the students who attended a two room school, as far as the learning results are concerned.
- A notable difference is observed during A grade attendance between boys and girls. More specifically girls achieve higher performances with a tendency towards excellent performances. That is, the majority (about 73%) of the girls present very good to excellent performances in all three years of attendance in high school. The above finding is noted at all the subjects in all three years of attendance in high school with a tendency towards excellent performances.
- It is observed a particularly low performance of the boys who come from two room schools at Maths.
- The students of two room schools, both boys and girls, perform better at A grade of high school than in B grade, which leads to the conclusion that they have smoothly adapted to high school, which entails the effectiveness of two room school at least at the satisfactory level.
- There is a rather general stability at the performance of students of TCS at all subjects in all three years of attendance in high school. What is characteristic though is the inconsistency that the boys make relatively little progress whereas the grade majority of girls have high to excellent records.

Table 2. Type of school: TCS

		Descriptively		
		N	Mean	T.A.
Language	B1	11	15.73	2.832
	B2	11	15.82	2.857
	B3	11	16.18	3.311
	Total	33	15.91	2.919
Mathematics	B1	11	14.73	3.467
	B2	11	14.27	3.495
	B3	11	14.18	2.994
	Total	33	14.39	3.230
Sciences	B1	11	14.82	2.857
	B2	11	15.09	2.914
	B3	11	16.18	2.562
	Total	33	15.36	2.759
Foreign Languages	B1	11	15.91	2.548
	B2	11	15.36	2.942
	B3	11	15.09	2.982
	Total	33	15.45	2.762
Theoretical Subjects	B1	11	14.91	3.208
	B2	11	15.91	3.081
	B3	11	15.82	2.857
	Total	33	15.55	2.991
	B1	11	16.45	2.806
	B2	11	16.00	2.608
	B3	11	16.55	2.339
	Total	33	16.33	2.521

Table 2 continues.....

		Total of Squares	Square of average rate	F	Importance
Language	Among Teams	1.273	.636	.070	.932
	Within Teams	271.455	9.048		
	Total	272.727			
Mathematics	Among Teams	1.879	.939	.085	.919
	Within Teams	332.000	11.067		
	Total	333.879			
Sciences	Among Teams	11.455	5.727	.740	.486
	Within Teams	232.182	7.739		
	Total	243.636			
Foreign Languages	Among Teams	3.818	1.909	.238	.789
	Within Teams	240.364	8.012		
	Total	244.182			
Theoretical	Among Teams	6.727	3.364	.361	.700
	Within Teams	279.455	9.315		
	Total	286.182			
New Technology	Among Teams	1.879	.939	.140	.870
	Within Teams	201.455	6.715		
	Total	203.333			

- A more general finding is that the teaching provided at TCS schools is at a satisfactory level, which contributes with a smooth dealing with the learning need at high school and especially at A grade.

4.3.3 As for the THCS:

- The initial finding is the existence of a percentage of students leaking at B and C grades of high school, which touches the margins of the following percentage: There is a leaking of 8% from A grade to B grade for both boys and girls which doubles from B grade to C grade (16%). Therefore the total leaking percentage from A to C grade is approximately 25% or to put it differently ¼ of the sample. The above finding requires special care with possible references to social, as well as to other reasons which are worth being examined in another research.
- The majority of students who attended a THCS at A grade, which is the adaptation year in high school and the grade in which you mainly notice the impact of the attendance of primary school as far as their general final performances, shows relatively good with a tendency towards very good performances. The same stands for the B grade, though there has been noticed a decline in the general performance in C grade of high school. More specifically 78% of the girls achieve a very good to excellent general performance in A grade. This percentage however is on the decline of about 20% in B and C grades of high school. What is also typical, is that only 4% of the students who attended three room primary schools, have especially low general performances (ranging between 10-11) in all three years of attendance in high school. There is also a strong percentage of 41% to 51% which shows relatively a good general performance, which ranges from 12-14. Nevertheless even in this case, the percentage is 41% in A grade and increases gradually in the next two grades of high school up to 51%.

- The declining tendency of the performance of the students who attended THCS, gradually in their high school attendance stands for almost all the school subjects, with the exception of Foreign Languages and Theoretical subjects where girls show a gradual progress.
- A more general estimation is that of the students who attended THCS girls achieve higher performances, but boys are no inferior to them, except for the subjects of Greek Language and Maths, where boys range between 12 -14.
- The finding concerning the progress of students who have attended the three room primary school do not support the hypothesis, as well as the mainstream view, that the closer we get to place of the OACS, the higher the progress of the students. On the other hand it is obvious that SRPS can offer adequate teaching and educational work.

Table 3. Type of school: THCS

		Descriptively		
		N	Mean	T.A.
Language	C1	74	14.01	2.826
	C2	69	14.45	2.963
	C3	57	13.91	3.031
	Total	200	14.14	2.927
Mathematics	C1	74	13.24	3.174
	C2	69	13.13	3.272
	C3	57	12.77	3.235
	Total	200	13.07	3.215
Sciences	C1	74	15.00	2.799
	C2	69	14.55	3.123
	C3	57	14.47	3.024
	Total	200	14.70	2.973
Foreign Languages	C1	74	15.16	3.256
	C2	69	14.48	3.319
	C3	57	14.12	3.428
	Total	200	14.63	3.339
Theoretical Subjects	C1	74	14.41	2.809
	C2	69	15.33	2.737
	C3	57	14.95	3.276
	Total	200	14.88	2.937
New Technology	C1	74	16.74	2.586
	C2	69	17.06	2.572
	C3	56	15.32	2.509
	Total	199	16.45	2.647

Table 3 continues.....

		Total of Squares	Square of average rate	F	Importance
Language	Among Teams	10.735	5.367	.624	.537
	Within Teams	1694.620	8.602		
	Total	1705.355			
Mathematics	Among Teams	7.537	3.769	.362	.697
	Within Teams	2049.483	10.403		
	Total	2057.020			
Sciences	Among Teams	11.112	5.556	.626	.536
	Within Teams	1747.283	8.869		
	Total	1758.395			
Foreign Languages	Among Teams	37.208	18.604	1.680	.189
	Within Teams	2181.412	11.073		
	Total	2218.620			
Theoretical	Among Teams	31.107	15.553	1.817	.165
	Within Teams	1686.013	8.558		
	Total	1717.120			
New Technology	Among Teams	103.192	51.596	7.875	.001
	Within Teams	1284.104	6.552		
	Total	1387.296			

Post Hoc Tests

Multiple comparisons

Subject: New Technology

(I) School	(J) School	Mean Difference (I-J)	Typical Error	Importance
C1	C2	-.315	.428	1.000
	C3	1.422*	.453	.006
C2	C1	.315	.428	1.000
	C3	1.737*	.460	.001
C3	C1	-1.422*	.453	.006
	C2	-1.737*	.460	.001

* The average difference is important on a 0.05 level.

A statistically significant difference between the classes C1-C3, C2-C3 but not between C1-C2. Working out the above data, arose the results which are presented in the following chapter. However, at this point, is pointed out that the basic outcome of the result of the present research, is what corresponds to the results of other researched mainly internationally as they have been presented in the theoretical part of the present article. This element is suggestive of the functional potentialities of the SRPS. And the prospects they can set off.

5. DISCUSSION

According to the findings of table 1 do not verify the hypothesis of the research that the general average rate of student performance who attends OCS is especially low at high school. Moreover, the level of performance of the particular students at High School, denotes that they can attend the higher rung of Secondary Education, that is Lyceum,

adequately. Furthermore, girls have higher performance in any level and subject. A possible explanation of the general lower performance of the boys compared to that of the girls at SRPS could be the lower motivation for educational attainments and their possible encouraging to deal with other activities of differentiated social and professional orientation. A positive finding could also be the fairly good to very good performance of the majority of students (ranging between "15-17") for the subject of foreign language, and New Technology, provided that these particular subjects are not taught as basic subject in one room primary school. However, a very significant finding is that both the general performance of the students as well as their partial performance in each subject, ranges from satisfactory to very satisfactory.

It is important that are presented the same results and the second type of school (TCS) as appeared in table 2. Particularly, the importance of the finding is enhanced by the fact that a significant percent of the students reach the highest level of performance, which ranges between 18-20. Moreover, there is a corresponding percentage ranges in a very good performance (between 15-17) in all three years of attendance in high school and the girls achieve high grades in all learning levels during their studies at high school. More specifically girls achieve higher performances with a tendency towards excellent performances. What should be pointed out though is that there is a significant fluctuation in performance, between boys and girls. This however cannot be attributed to the teaching methods and efficiency of TCS. Probably there are other factors which influence the performance of boys in SRPS. We could assume that the low performance of boys is attributed to the school only in the case of the performance of the girls was low as well. This certainly could be the subject of a future research though in the sample of the present research is pointed out the weakness of the countitative differentiation between boys and girls. Also, the girls achieve higher performances with a tendency towards excellence in all cognitive sectors in all grades of high school. Boys, on the other hand achieve relatively good performance at Language as well as Sciences, New Technology, and Theoretical subjects whereas there has been observed a gradual decrease at the performance in Maths and Foreign Languages during the three years of attendance in high school. A more general finding is that the teaching provided at TCS schools is at a satisfactory level, which contributes with a smooth dealing with the learning need at high school and especially at A grade. The above finding spreads further if we take for graded that the students of the two room schools are used to the presence of one teacher, whereas at high school to more teachers. Probably the above finding of a TCS counterbalances with the intrapersonal relationships observed between students of different ages. There is a corresponding finding for OCS.

About the THCS the main finding concerning the progress of students who have attended the three room primary school do not support the hypothesis, as well as the mainstream view, that the closer we get to place of the OACS, the higher the progress of the students. On the other hand it is obvious that SRPS can offer adequate teaching and educational work.

Summing up the findings it is possible to centralize in three general point: first, that SRPS are able to provide essential and adequate teaching work, reversing the opposite viewpoint. Second, those girls have higher academic performance than boys and third, that students appeared to have "good" and "very good" academic performance.

6. CONCLUSIONS

From the findings of the research could be pointed out that SRPS can be offered an effective education when used as criterion for the academic performance of students. So it is vital to support this type of school for the educational and teaching work. The tendency therefore, of the educational policy as well as that of the legislators should be for its functional improvement and not unsubstantiated logic of its "abolition". A measure that would definitely contribute to that would be the creation of orientated potential teachers at Pedagogical Department of Primary Education, where they would be adequately trained to practice teaching at SRPS where they would be appointed for a specific period of their teaching career. To develop professional know-how for alternative primary education applications and to attempt to make qualitative and quantitative arrangements (programme compliance) on these schools based on this knowledge as well as the other attempts (such providing all schools with the same human and device equipment) are the necessary precautions. Richly equipped schools with necessary facilities (in terms of all school elements) can bring forth improvements in ordinary program beyond expectations (Benveniste and McEwan 2000).

Concluding, it is stressed that with the present research is covered an essential bibliographical gap, whereas simultaneously new horizons for research and approach of SRPS open.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Aksoy, N. (2008). Multigrade schooling in Turkey: An overview. *International Journal of Educational Development*, 28(2), 218-228.
- Benveniste, L. McEwan, P. (2000). Constraints to Implementing Educational Innovations: The case of multigrade schools. *International Review of Education*, 46(1-2), 31-48.
- Cohn, E., Rossmiller, R. (1997). Research on effective schools Implications for less developed countries. *Comparative Education Review*, 31(3), 377-399.
- Dewalt, M. (1997). One room schools: Current trends in Public and Private education. Paper presented at the Annual Meeting of the Eastern Educational Research Association.
- Fuller, W. (1994). One room school of the Middle West. Kansas University of Kansas.
- Fykaris, I. (2002). Small Rural Primary School in Greek Education: Theoretical and Empirical approach. Thessaloniki: Kyriakidis Brs Publication (in Greek).
- Fykaris, I. (2010). Contemporary dimensions of teaching: Limitations and possibilities. Thessaloniki: Kyriakidis Brs Publication (in Greek).
- Galagher, A. (1993). Small rural primary school: A research review. Cookstone, Tyrone: Rural development Council for Northern Ireland.
- Galagher, A. (1993a). Small Primary schools. A research Review. North Ireland: Co Tyrone.
- Galton, M. (1993). Managing Education in Small primary school, London: ASPE/ Trentham books.
- Galton, M. Hargraves, L., Comber, C. (1998). Classroom practice and the national curriculum in small rural primary schools. *British Educational Research Journal*, 24(1), 43-61.
- Greek Law. 352/1975.

- Greek Pedagogical Institute. (2003). Curriculum in Primary Education. Ministry of Education: Athens.
- Kishore, L. (2003). Multigrade Teaching in India: A study of selected practices. Unpublished research paper. New Delhi: UNESCO.
- Kumar, K., Oesterheld, J. (2007). Education and Social Change in South Asia. New Delhi: Orient Longman.
- Little, A. (ed.) (2006). Education for All and Multigrade Teaching: Challenges and Opportunities. Dordrecht: Springer.
- MacLaughlin, D. (1997). Characteristics of small and rural school districts. Washington: US Office of Educational Research and Improvement.
- Menon, L., Rao, Y.A.P. (2006) Multi-grade for Remote and Disadvantaged Schools. In L. Cornish (ed.), Reaching EFA through Multi-grade Teaching: Issues, Contexts and Practices. Armidale, Australia: Kardoorair Press, Inc.
- OECD. (1994). The educational infrastructure in rural areas. France.
- OECD. (2003). Programme for International Student Assessment Learning for Tomorrow's World. First Results from PISA 2003. France.
- Ribchester, C., Edwards, W. (1998). Co-operation in the country side: Small primary school clusters. *Educational Studies*, 24(3), 281-293.
- Slavin, R. (1990). Cooperative Learning. Husen, T., Postlethwaite, T. (eds): *The International Encyclopaedia of Education*, 2, 1094-1099.
- Tabitha, D., Terry, K. (1995). Multiage classroom by design: Beyond the one room school. California: Corwin Press.
- Topracki, E. (2010). The reality of Primary Schools and Basic Education in Turkey. *E-International Journal of Educational Research*, 1(1), 1-17.
- Tyler, R., Horky, L., Miller, J. (1998). How can schools and communities work together to improve our rural schools. *Rural Educator*, 20(2), 33-45.
- Weishaupt, H., Fickerman, W. (1998). *Kleine Grunschulen in Europa*. Weinheim: Dt Studien.